ITEM NO. 6

December 3, 2002

ERRATA SHEET

Transportation Corridor Authority/Silverado Constructors, Eastern Transportation Corridor
Section 14 – Denitrification Facility, Irvine, Orange County

(Language added is **shaded**)
(Language deleted is ~~struck~~ out)

1. Order No. R8-2002-0093, page 1 of 10, revise page title header as follows:

California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2002-0093
NPDES No. CA8000390

Waste Discharge Requirements
For
Transportation Corridor Agencies/Silverado Constructors
Eastern Transportation Corridor, Section 14 - Denitrification Facility
Irvine, Orange County

2. Order No. R8-2002-0093, page 1 of 10, revise Finding No. 1 as follows:

1. **Transporation Corridor Agencies owns the Eastern Transportation Corridor Section 14 - Denitrification Facility and contracts with** Silverado Constructors (hereinafter dischargers), to operates the ~~Eastern Transportation Corridor, Section 14 - Denitrification~~ facility. The Denitrification Facility is currently regulated under Waste Discharge Requirements Order No. 98-28, NPDES No. CA8000390, issued on January 23, 1998 and amended by Order No. 00-62 on June 30, 2000 to include a phosphorous offset requirement. Order No. 98-28, NPDES No. CA8000390, prescribed waste discharge requirements for the discharge of treated groundwater and filter backwash wastewater from the denitrification facility into Peters Canyon Wash, a tributary to San Diego Creek and thence Newport Bay. Order No. 98-28 will expire on January 1, 2003.

3. Order No. R8-2002-0093, page 1 of 10, revise Finding No. 3 as follows:

3. On October 25, 2002, ~~the discharger~~ **Silverado Constructors** submitted a complete application for the renewal of waste discharge requirements.

4. Order No. R8-2002-0093, page 4 of 10, revise Finding No. 22 as follows

22. This Order implements relevant provisions of the CTR, the EPA selenium TMDL for San Diego Creek and Newport Bay, and the State Board Policy. This Order specifies effluent limitations for selenium that implement the EPA TMDL wasteload allocations. Section 2.1 of the State Implementation Policy provides that a compliance schedule may be established in an NPDES permit based on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with an effluent limitation based on the California Toxics Rule criterion. Silverado Constructors is an existing discharger and has requested that a compliance schedule for selenium be included in the Order. Immediate compliance with the proposed effluent limitations for selenium is infeasible. This Order requires that compliance with these limitations be achieved as soon as possible, but no later than December 1, 2007. This Order requires the discharger to submit ~~for approval by the Executive Officer of the Regional Board~~ a report that includes a plan and schedule for achieving compliance**.** ~~and to implement that plan upon approval~~. **This Order will be re-opened to specify interim and other requirements based on this report, as appropriate.** This Order also includes an interim numeric limit, in conformance with the State Board policy.

5. Order No. R8-2002-0093, page 4 of 10, add the following new Finding No. 23 and re-number remaining Findings, accordingly:

23. A review of the status of selenium removal technologies indicates that there is no currently available technology that can achieve the selenium reduction in the discharge needed to achieve compliance with the final effluent limit specified in this Order, given the magnitude and nature of the discharge (selenate-dominated). Even if such technology were available, it could not be implemented in time to assure immediate compliance with the final effluent limit. The discharger may be able to reduce or even eliminate selenium discharges by the implementation of short-term measures, such as sewering all or part of the groundwater collected in the passive subdrain system. The discharger currently has agreements with the sewering agencies to discharge filter backwash to the sewer. The feasibility of increasing the discharge to the sewer requires further evaluation; implementation of this option, if feasible, would require amendment of the agreements with the sewering agencies. This Order requires the discharger to evaluate the technical and economic feasibility of such options to reduce/eliminate selenium discharges, and to report on that evaluation by April 1, 2003. This Order will be re-opened, if necessary, to consider appropriate revisions based on the results of this evaluation.

6. Order No. R8-2002-0093, page 9 of 10, add the following new Provision No. 10 and renumber the remaining Provisions accordingly.

10. By April 1, 2003, the discharger shall submit a report that evaluates the technical and economic feasibility of potential short-term options to reduce or eliminate selenium discharges to Peters Canyon Wash (e.g., sewering of the treated (or untreated) groundwater collected in the passive subdrain system). The report shall identify the schedule needed to implement each of the alternatives. This Order will be re-opened, if necessary, to consider appropriate revisions based on the results of this evaluation.

7. Order No. R8-2002-0093, page 9 of 10, revise Provision No. 11 and renumber the remaining Provisions accordingly.

11. By June 1, 2003, the discharger shall submit ~~for approval by the Executive Officer of the Regional Board~~ a report that includes a plan and schedule for achieving compliance with the final selenium effluent limitation specified in Discharge Specification A.2.b. The proposed schedule shall reflect the need to achieve compliance as soon as possible, but not later than the date specified. ~~The discharger shall implement this plan upon approval~~. **This Order will be re-opened to specify interim and other requirements based on this report, as appropriate.**

8. Monitoringand Reporting Program No. R8-2002-0093, page 1 of 5, revise page title header as follows:

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2002-0093
NPDES No. CA8000390
for
Transportation Corridor Agencies/Silverado Constructors
Eastern Transportation Corridor, Section 14 – Denitrification Facility
Irvine, Orange County

California Regional Water Quality Control Board
Santa Ana Region

STAFF REPORT

December 3, 2002

ITEM: 6

SUBJECT: Waste Discharge Requirements, Silverado Constructors, Eastern Transportation Corridor, Section 14, Denitrification Facility, Irvine, Orange County, Order No. R8-2002-0093, NPDES No. CA8000390

DISCUSSION:

Silverado Constructors (hereinafter discharger), operates the Eastern Transportation Corridor, Section 14 - Denitrification Facility. The Denitrification Facility is currently regulated under Waste Discharge Requirements Order No. 98-28, NPDES No. CA8000390, issued on January 23, 1998 and amended by Order No. 00-62 on June 30, 2000 to include a phosphorous offset requirement. Order No. 98-28, NPDES No. CA8000390, prescribed waste discharge requirements for the discharge of treated groundwater and filter backwash wastewater from a denitrification facility into Peters Canyon Wash, a tributary to San Diego Creek and thence Newport Bay. Order No. 98-28 will expire on January 1, 2003. On October 25, 2002, the discharger submitted a complete application for the renewal of waste discharge requirements.

The Eastern Transportation Corridor (ETC) is a 26-mile tollway connecting Interstate 5 to Route 91 in Orange County. During construction of the ETC, shallow groundwater was encountered within the section that originates at Jamboree Road near Edinger Avenue. This section of the tollway is depressed below the existing ground surface. The discharger has constructed a passive subdrain system to intercept groundwater and maintain the groundwater table at a level below the grade in the vicinity of the tollway. Groundwater dewatering is necessary to maintain the tollway.

The groundwater being intercepted contains high concentrations of nitrate. In accordance with the Board's Nutrient TMDL for the Newport Bay/San Diego Creek Watershed, Order No. 98-28 required the discharger to reduce the nitrogen concentration of the intercepted groundwater by 50%, and set an average total nitrogen discharge limit of 13 mg/l.

The discharger constructed the denitrification facility to achieve compliance with the nitrogen removal requirements of Order No. 98-28. The denitrification facility relies on a biological treatment system to remove nitrogen. However, during the initial operation of the facility, it was found that phosphorus must be added to support the biological system. This addition of phosphorus results in residual phosphorus in the treatment facility effluent (average concentration of about 0.6 mg/l).

The discharger modified the denitrification facility to reduce the residual phosphorus discharges to no greater than 0.3 mg/l. These modifications include permanent discharge of the filter backwash to the sewer system, and installation of a flow-paced metering system to assure that phosphorus is fed into the system only in amounts necessary to maintain biological activity. The discharger also implemented a phosphorus offset program. The discharger pays for the removal of phosphorus-containing sediment from sediment-trapping basins in San Diego Creek in sufficient quantity to offset the phosphorus added due to discharges from the denitrification facility. This results in no net loading of phosphorus to Newport Bay. This approach is consistent with the Nutrient TMDL, which calls for reductions in phosphorus loading and relies largely on the implementation of the Board's Sediment TMDL for the Newport Bay/San Diego Creek Watershed to achieve them. The offset program proposed by the discharger is consistent with the Nutrient TMDL, provided that a) the amount of sediment removed by the discharger is in excess of the sediment removal necessary to achieve compliance with the sediment TMDL and b) the amount of phosphorus contained in the sediment removed by the discharger is at least equivalent to the amount of phosphorus added by the discharge from the denitrification facility.

On May 18, 2000, the U.S. Environmental Protection Agency (EPA) issued a final rule for the establishment of Numeric Criteria for Priority Toxic Pollutants necessary to fulfill the requirements of Section 303(c)(2)(B) of the Clean Water Act for the State of California. This rule is commonly referred to as the California Toxics Rule (CTR).

On March 2, 2000, the State Water Resources Control Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (the Policy). This Policy includes implementation provisions for the CTR. The Policy specifies a methodology to determine if pollutants in the discharge are at a level that will cause, have the reasonable potential to cause, or contribute to an excursion of a water quality standard, and delineates procedures to be used to calculate appropriate limits. The Policy also includes compliance schedule provisions for effluent limitations that implement the CTR.

On June 14, 2002, the U.S. EPA Region 9 established a total maximum daily load (TMDL) for selenium (and other toxic pollutants not found in the Denitrification Facility discharge) for San Diego Creek and Newport Bay. The selenium TMDL includes wasteload allocations for the Denitrification Facility discharge, based on the selenium criterion specified in the CTR.

The EPA TMDLs do not include specific implementation requirements, such as compliance timeframes, interim numeric targets, etc, since implementation plans are the responsibility of the Regional Board. Regional Board staff is now working on an implementation plan for the selenium TMDL, which will be considered for future adoption as a Basin Plan amendment. Staff may also recommend revisions to the selenium TMDL established by EPA based on ongoing studies by EPA, Board staff and others. In its documents establishing the toxic TMDLs, EPA recognizes the substantial uncertainties that remain concerning selenium sources, biological effects, and the appropriate numeric objective that should apply to the protection of beneficial uses. EPA is now engaged in a review of the selenium objective in the CTR. Resolution of these uncertainties, and possible revision of the numeric selenium objective, is likely to require future refinement of the selenium TMDL. Therefore, a phased approach to the implementation of the selenium TMDL is appropriate and necessary.

However, pursuant to federal regulations, the Regional Board is required to ensure that NPDES permits for discharges in this watershed contain effluent limitations necessary to be consistent with the wasteload allocations specified in the selenium TMDL. In the absence of an adopted implementation plan, the Regional Board can and must employ its legally authorized discretion in determining the appropriate permit provisions to implement these allocations.

This Order implements relevant provisions of the CTR, the EPA selenium TMDL for San Diego Creek and Newport Bay, and the State Board Policy. This Order specifies effluent limitations for selenium that implement the EPA TMDL wasteload allocations. Section 2.1 of the State Implementation Policy provides that a compliance schedule may be established in an NPDES permit based on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with an effluent limitation based on the California Toxics Rule criterion. Silverado Constructors is an existing discharger and has requested that a compliance schedule for selenium be included in the Order. Immediate compliance with the proposed effluent limitations for selenium is infeasible. This Order requires that compliance with these limitations be achieved as soon as possible, but no later than December 1, 2007. This Order requires the discharger to submit for approval by the Executive Officer of the Regional Board a report that includes a plan and schedule for achieving compliance.

The Board has considered the effects of the discharge from the Denitrification Facility on the receiving waters (Peters Canyon Wash, San Diego Creek, Newport Bay) in conjunction with the implementation of the phosphorus offset program required by this Order. The discharge, in conjunction with the offset, will not result in a lowering of the water quality of the affected receiving waters. Therefore, an antidegradation analysis is not required pursuant to federal regulations (40 CFR 131.12). The discharge with the offset is consistent with State antidegradation policy (State Water Resources Control Board Resolution No. 68-16). The discharge, with the offset, will not result in any adverse impacts to the present or potential beneficial uses of the receiving waters, if conducted in accordance with the terms and conditions of this Order.

The requirements contained in this Order are necessary to implement the Basin Plan, as well as to protect beneficial uses of the affected receiving waters, namely Peters Canyon Wash, San Diego Creek and Newport Bay. The beneficial uses of these receiving waters include: groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, wildlife habitat, commercial and sportfishing, preservation of biological habitats of special significance, rare threatened or endangered species, spawning, reproduction and development, marine habitat, shellfish harvesting, and estuarine habitat.

The facility location is shown in Attachment "A" of this staff report.

A schematic diagram of the treatment process is shown in Attachment "B" of this staff report.

RECOMMENDATION:

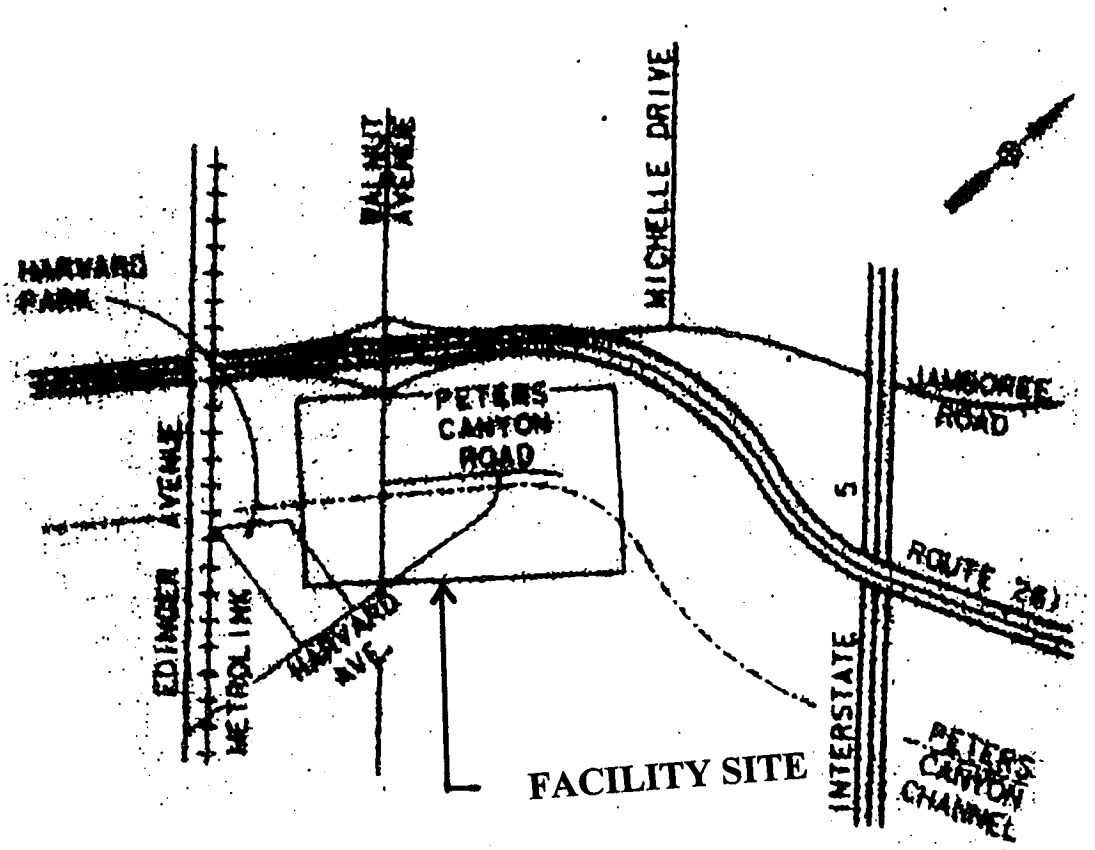
Adopt Order No. R8-2002-0093, NPDES No. CA8000390, as presented.

Comments were solicited from the following persons and agencies:

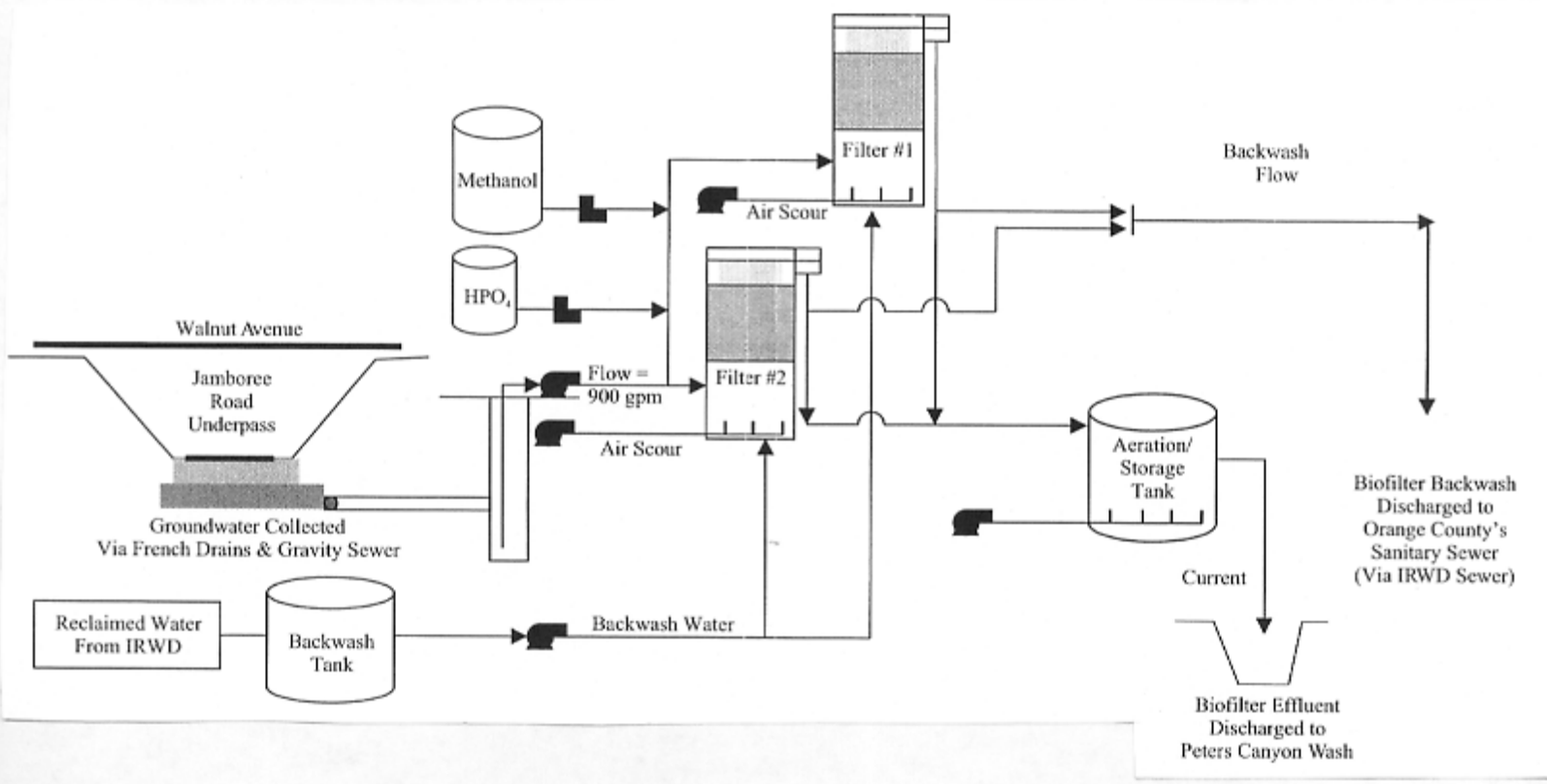
U.S. Environmental Protection Agency, Permits Issuance Section (WTR-5) - Terry Oda
U.S. Army District, Los Angeles, Corps of Engineers, Regulatory Branch
NOAA, National Marine Fisheries Service
U.S. Fish and Wildlife Service - Carlsbad
State Water Resources Control Board, Office of the Chief Counsel – Jorge Leon
State Water Resources Control Board, Division of Water Quality – Jim Maughan
State Department of Water Resources - Glendale
State Department of Fish and Game - Long Beach
State Department of Health Services, Santa Ana – Frank Hamamura
Orange County Health Care Agency - Larry Honeybourne
Orange County Flood Control and Water Conservation District - Herb Nakasone
Orange County Water District - Nira Yamachika
Orange County Public Facilities and Resources Dept, Harbors Beaches & Parks – Chris Crompton
Irvine Ranch Water District - John Hills
County Sanitation Districts of Orange County - Chuck Hodge
Caltrans, District 12 – Lee Haber
Harbor Quality Committee - Dr. John Skinner
Defend the Bay - Robert J. Caustin
City of Newport Beach, City Manger - Kevin Murphy
Orange County Coastkeeper – Garry Brown
City of Irvine – City Manager
City of Newport Beach – City Manager
South Coast Air Quality Management District
Lawyers for Clean Water C/c San Francisco Baykeeper
Environ Strategy – Jinghui Nui

Attachment "A"
Staff Report
Order No. R8-2002-0093, NPDES No. CA8000390
Silverado Constructors, Section 14 - Denitrification Facility, Irvine

LOCATION MAP



Schematic of Treatment Plant Wastewater Flow



California Regional Water Quality Control Board
Santa Ana Region

Order No. R8-2002-0093
NPDES No. CA8000390

Waste Discharge Requirements
For
Silverado Constructors
Eastern Transportation Corridor, Section 14 - Denitrification Facility
Irvine, Orange County

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Board) finds that:

1. Silverado Constructors (hereinafter discharger), operates the Eastern Transportation Corridor, Section 14 - Denitrification Facility. The Denitrification Facility is currently regulated under Waste Discharge Requirements Order No. 98-28, NPDES No. CA8000390, issued on January 23, 1998 and amended by Order No. 00-62 on June 30, 2000 to include a phosphorous offset requirement. Order No. 98-28, NPDES No. CA8000390, prescribed waste discharge requirements for the discharge of treated groundwater and filter backwash wastewater from the denitrification facility into Peters Canyon Wash, a tributary to San Diego Creek and thence Newport Bay. Order No. 98-28 will expire on January 1, 2003.

2. On October 11, 2002, the California Department of Transportation (CalTrans) submitted a complete National Pollutant Discharge Elimination System (NPDES) permit renewal application for re-issuance of waste discharge requirements. On October 22, 2002, CalTrans advised Board staff that the NPDES application was submitted only in preparation of a future transfer of ownership of the denitrification facility from Silverado Constructors to CalTrans. It is unknown at this time when the transfer will occur.

3. On October 25, 2002, the discharger submitted a complete application for the renewal of waste discharge requirements.

4. The discharger is currently working on the transfer of the Denitrification Facility to the California Transportation Department, District 12. Upon acceptance of the Denitrification facility by the California Department of Transportation, District 12, this Order will be transferred to the California Department of Transportation, District 12.

5. The Eastern Transportation Corridor (ETC) is a 26-mile tollway connecting Interstate 5 to Route 91 in Orange County. During construction of the ETC, shallow groundwater was encountered within the section originating at Jamboree Road near Edinger Avenue. This section of the tollway is depressed below the existing ground surface. The discharger has constructed a passive subdrain system to intercept groundwater and maintain the groundwater table at a level below the grade in the vicinity of the tollway. Groundwater dewatering is necessary to maintain the tollway.

6. The groundwater being intercepted contains high concentrations of nitrate. In accordance with the Board's Nutrient TMDL for the Newport Bay/San Diego Creek Watershed, Order No. 98-28 required the discharger to reduce the nitrogen concentration of the intercepted groundwater by 50%, and sets an average total nitrogen discharge limit of 13 mg/l.

7. The discharger constructed the denitrification facility to achieve compliance with the nitrogen removal requirements of Order No. 98-28. The denitrification facility relies on a biological treatment system to remove nitrogen. However, during the initial operation of the facility, it was found that phosphorus must be added to support the biological system. This addition of phosphorus results in residual phosphorus in the treatment facility effluent (average concentration of about 0.6 mg/l).

8. The discharger modified the denitrification facility to reduce the residual phosphorus concentration to no greater than 0.3 mg/l. These modifications include permanent discharge of the filter backwash to the sewer system, and installation of a flow-paced metering system to assure that phosphorus is fed into the system only in amounts necessary to maintain biological activity.

9. The discharger has implemented a phosphorus-offset program. Silverado pays for the removal of phosphorus-containing sediment from sediment-trapping basins in San Diego Creek in sufficient quantity to offset the phosphorus added due to discharges from the denitrification facility. The result is no net loading of phosphorus to Newport Bay. . This approach is consistent with the Nutrient TMDL, which calls for reductions in phosphorus loading and relies largely on the implementation of the Board's Sediment TMDL for the Newport Bay/San Diego Creek Watershed to achieve them.

10. The phosphorus offset program proposed by the discharger is consistent with the Nutrient TMDL, provided that a) the amount of sediment removed by the discharger is in excess of the sediment removal necessary to achieve compliance with the sediment TMDL and b) the amount of phosphorus contained in the sediment removed by the discharger is at least equivalent to the amount of phosphorus added by the discharge from the denitrification facility.

11. The denitrification facility is located at 3201 ½ Walnut Avenue, City of Irvine. The point of discharge is located at State Route 261 and Walnut Avenue, within Section 63, T5S, R9W of the SBB&M in the Irvine area.

12. A Water Quality Control Plan (Basin Plan) became effective on January 24, 1995. The Basin Plan contains beneficial uses and water quality objectives for waters in the Santa Ana Region.

13. The requirements contained in this Order are necessary to implement the Basin Plan, as well as to protect beneficial uses of the affected receiving waters, namely Peters Canyon Wash, San Diego Creek and Newport Bay.

14. The beneficial uses of Peters Canyon Wash include:

    a. Groundwater recharge,
    b. Water contact recreation,
    c. Non-contact water recreation,
    d. Warm freshwater habitat, and
    e. Wildlife habitat.

15. Peters Canyon Wash is tributary to San Diego Creek, the beneficial uses of which include:

    a. Water contact recreation,
    b. Non-contact water recreation,
    c. Warm freshwater habitat, and
    d. Wildlife habitat.

16. San Diego Creek is tributary to Upper Newport Bay, the beneficial uses of which include:

    a. Water contact recreation,
    b. Non-contact water recreation,
    c. Commercial and sportfishing,
    d. Preservation of biological habitats of special significance,
    e. Wildlife habitat,
    f. Rare threatened or endangered species,
    g. Spawning, reproduction and development,
    h. Marine habitat,
    i. Shellfish harvesting, and
    j. Estuarine habitat.

17. On May 18, 2000, the U.S. Environmental Protection Agency (EPA) issued a final rule for the establishment of Numeric Criteria for Priority Toxic Pollutants necessary to fulfill the requirements of Section 303(c)(2)(B) of the Clean Water Act for the State of California. This rule is commonly referred to as the California Toxics Rule (CTR).

18. On March 2, 2000, the State Water Resources Control Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (the Policy). This Policy includes implementation provisions for the CTR. The Policy specifies a methodology to determine if pollutants in the discharge are at a level that will cause, have the reasonable potential to cause, or contribute to an excursion of a water quality standard, and delineates procedures to be used to calculate appropriate limits. This Policy also includes compliance schedule provisions for effluent limitations that implement the CTR.

19. On June 14, 2002, the U.S. EPA Region 9 established a total maximum daily load (TMDL) for selenium (and other toxic pollutants not found in the Denitrification Facility discharge) for San Diego Creek and Newport Bay. The selenium TMDL includes wasteload allocations for the Denitrification Facility discharge, based on the selenium criterion specified in the CTR.

20. The EPA TMDLs do not include specific implementation requirements, such as compliance timeframes, interim numeric targets, etc, since implementation plans are the responsibility of the Regional Board. Regional Board staff is now working on an implementation plan for the selenium TMDL, which will be considered for future adoption by the Regional Board as a Basin Plan amendment. Staff may also recommend revisions to the selenium TMDL established by EPA based on ongoing studies by EPA, Board staff and others. In its documents establishing the toxic TMDLs, EPA recognizes the substantial uncertainties that remain concerning selenium sources, biological effects, and the appropriate numeric objective that should apply to the protection of beneficial uses. EPA is now engaged in a review of the selenium objective in the CTR. Resolution of these uncertainties, and possible revision of the numeric selenium objective, is likely to require future refinement of the selenium TMDL. Therefore, a phased approach to the implementation of the selenium TMDL is appropriate and necessary.

21. However, pursuant to federal regulations, the Regional Board is required to ensure that NPDES permits for discharges in this watershed contain effluent limitations necessary to be consistent with the wasteload allocations specified in the selenium TMDL. In the absence of an adopted implementation plan, the Regional Board can and must employ its legally authorized discretion in determining the appropriate permit provisions to implement these allocations.

22. This Order implements relevant provisions of the CTR, the EPA selenium TMDL for San Diego Creek and Newport Bay, and the State Board Policy. This Order specifies effluent limitations for selenium that implement the EPA TMDL wasteload allocations. Section 2.1 of the State Implementation Policy provides that a compliance schedule may be established in an NPDES permit based on an existing discharger's request and demonstration that it is infeasible for the discharger to achieve immediate compliance with an effluent limitation based on the California Toxics Rule criterion. Silverado Constructors is an existing discharger and has requested that a compliance schedule for selenium be included in the Order. Immediate compliance with the proposed effluent limitations for selenium is infeasible. This Order requires that compliance with these limitations be achieved as soon as possible, but no later than December 1, 2007. This Order requires the discharger to submit for approval by the Executive Officer of the Regional Board a report that includes a plan and schedule for achieving compliance, and to implement that plan upon approval. This Order also includes an interim numeric limit, in conformance with the State Board policy.

23. Violation(s) of interim effluent limitations are subject to the same enforcement remedies, as provided by the Water Code, that apply to violation(s) of final effluent limits.

24. The Board has considered the effects on the receiving waters (Peters Canyon Wash, San Diego Creek, Newport Bay) of the discharge from the denitrification facility in conjunction with the implementation of the phosphorus offset program required by this Order. The discharge, in conjunction with the offset, will not result in a lowering of the water quality of the affected receiving waters. Therefore, an antidegradation analysis is not required pursuant to federal regulations (40 CFR 131.12). The discharge with the offset is consistent with State antidegradation policy (State Water Resources Control Board Resolution No. 68-16). The discharge, with the offset, will not result in any adverse impacts to the present or potential beneficial uses of the receiving waters, if conducted in accordance with the terms and conditions of this Order.

25. In accordance with Water Code Section 13389, amending the waste discharge requirements for this discharge is exempt from those provisions of the California Environmental Quality Act contained in Chapter 3 (commencing with Section 21100), Division 13 of the Public Resources Code.

26. The Board has notified the discharger and other interested agencies and persons of its intent to amend waste discharge for the discharge and has provided them with an opportunity to submit their written views and recommendations.

27. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE SPECIFICATIONS

1. The discharge of wastes, other than that intercepted by the passive subdrain system at the tollway system located at Jamboree Road near Edinger Avenue, is prohibited.

2. The discharge of wastes containing constituent concentration in excess of the following limits is prohibited:

a. Biological/Total Nitrogen:

Constituent	**Monthly Average Concentration Limit**	**Monthly Average Mass Emission Rate[1]**
	(mg/l)	**(lbs/day)**
Biochemical Oxygen Demand	20	217
Suspended Solids	20	217
Total Nitrogen	13	141

b. Selenium:

INTERIM LIMIT		
Selenium	**Monthly Average Concentration Limit**	**Annual Average Mass Emission Rate[1]**
	(ug/l)	**(lbs/year)**
	55	217.7
FINAL LIMIT[2]		
Selenium	**Monthly Average Concentration Limit**	**Annual Average Mass Emission Rate**
	(ug/l)	**(lbs/year)**
	5	32.1

3. The discharge of any substances in concentrations toxic to animal or plant life is prohibited.

4. There shall be no visible oil and grease in the discharge.

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[1] *Mass emission rates are based on 1.3 mgd.*

[2] *Compliance to be achieved as soon as possible but no later than December 1, 2007. See also Provision 8.*

B. RECEIVING WATER LIMITATIONS[3]

1. The discharge of wastes shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Board or State Board, as required by the Clean Water Act and regulations adopted thereunder.

2. The discharge shall not cause any of the following:

   a. Coloration of the receiving waters which causes a nuisance or adversely affects beneficial uses.

   b. Deposition of oil, grease, wax or other materials in the receiving waters in concentrations which result in a visible film or in coating objects in the water, or which cause a nuisance or affect beneficial uses.

   c. An increase in the amounts of suspended or settleable solids in the receiving waters which will cause a nuisance or adversely affect beneficial uses as a result of controllable water quality factors.

   d. Taste or odor producing substances in the receiving waters at concentrations which cause a nuisance or adversely affect beneficial uses.

   e. The presence of radioactive materials in the receiving waters in concentrations which are deleterious to human, plant or animal life.

   f. The depletion of the dissolved oxygen concentration below 5.0 mg/l.

   g. The temperature of the receiving waters to be raised above 90°F (32°C) during the period of June through October, or above 78°F (26°C) during the rest of the year.

   h. The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving water. The discharge shall not result in the degradation of inland surface water communities and populations, including vertebrate, invertebrate, and plant species.

3. Pollutants not specifically mentioned and limited in this Order shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health.

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[3] *Receiving water limitations are specific interpretations of water quality objectives from applicable water quality control plans. As such they are a required part of this Order. A receiving water condition not in conformance with any of these receiving water limitations, is not necessarily a violation of this Order. The Regional Board may require an investigation to determine the cause and culpability prior to asserting a violation has occurred, or requiring that corrective action be taken.*

C. PROVISIONS

1. This Order shall serve as a National Pollutant Discharge Elimination System permit pursuant to Section 402 of the Clean Water Act, or amendments thereto, that shall become effective 10 days after the date of its adoption provided the Regional Administrator of the Environmental Protection Agency has no objection. If the Regional Administrator objects to its issuance, this Order shall not serve as an NPDES permit until such objection is withdrawn.

2. Neither the treatment nor the discharge of waste shall create, or threaten to create, a nuisance or pollution as defined by Section 13050 of the California Water Code.

3. The discharger shall comply with Monitoring and Reporting Program No. R8-2002-0093 as issued by the Executive Officer. Revision of this monitoring and reporting program by the Executive Officer may be necessary to confirm that the discharger is in compliance with the requirements and provisions contained in this Order. Revisions may be made at any time during the term of this Order, and may include an increase in the number of parameters to be monitored, the frequency of monitoring or the number and size of samples collected. Any such modifications may be reduced back to the levels specified in the original monitoring and reporting program at the discretion of the Executive Officer.

4. Order No. 98-28 is hereby rescinded.

5. Any discharge of phosphorus from the denitrification facility shall be offset by the removal of phosphorus-containing sediment from sediment-trapping basins in San Diego Creek in sufficient quantity to assure that there will be no net increase of phosphorous discharges to Newport Bay. The sediment removed for offset purposes shall be over and above that required to be removed from the basins pursuant to the requirements of the sediment TMDL for the Newport Bay/San Diego Creek watershed. Compliance with these requirements shall be determined in October of each year.

6. Compliance with average monthly discharge limitations specified under Discharge Specification A.2.a. shall be determined from the average of the analytical results of all samples collected during a calendar month. Where a calendar week overlaps two different months, compliance shall be determined for the month in which the week ends.

7. Compliance with the 12-month average limit under Discharge Specifications A.2.b. shall be determined by the arithmetic mean of the last twelve monthly averages.

8. The discharger shall maintain a copy of this Order at the site so that it is available to site operating personnel at all times. Key operating personnel shall be familiar with its content.

9. All discharges shall comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges to storm drain systems or other courses under their jurisdiction.

10. This Order expires on December 1, 2007, and the discharger must file a report of waste discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

11. By June 1, 2003, the discharger shall submit for approval by the Executive Officer of the Regional Board a report that includes a plan and schedule for achieving compliance with the final selenium effluent limitation specified in Discharge Specification A.2.b. The proposed schedule shall reflect the need to achieve compliance as soon as possible, but not later than the date specified. The discharger shall implement this plan upon approval.

12. The discharger must comply with all of the terms, requirements and conditions of this Order. Any violation of this Order constitutes a violation of the California Water Code and may constitute a violation of the Clean Water Act and its regulations, and is grounds for enforcement action, termination of the Order, revocation and reissuance of the Order, denial of an application for reissuance of the Order; or a combination thereof.

13. The discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.

14. The discharger shall take all reasonable steps to minimize any adverse impact to receiving waters resulting from noncompliance with any effluent limitations specified in this Order, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

15. In the event of any change in control or ownership of land or waste discharge facility presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to this Board.

16. This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of this Order to change the name of the discharger and incorporate such other requirements as may be necessary under the Clean Water Act.

17. The provisions of this Order are severable, and if any provision of this Order, or the application of any provisions of this Order to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Order shall not be affected thereby.

18. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the discharger from his liabilities under federal, state, or local laws, nor guarantee the discharger a capacity right in the receiving waters.

19. The Regional Board, EPA, and other authorized representatives shall be allowed:

    a. Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order;

    b. Access to copy any records that are kept under the conditions of the order;

    c. To inspect any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

    d. To photograph, sample and monitor for the purpose of assuring compliance with this Order, or as otherwise authorized by the Clean Water Act.

20. This Order may be reopened to address any changes in State or federal plans, policies or regulations that would affect the quality requirements for the discharges. This includes changes in relevant TMDLs and wasteload allocations specified therein for the discharge.

21. This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for modification, revocation and reissuance, or termination of this Order or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

I, Gerard J. Thibeault, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on December 3, 2002.

_____

Gerard J. Thibeault
Executive Officer

California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2002-0093
NPDES No. CA8000390
for
Silverado Constructors
Eastern Transportation Corridor, Section 14 – Denitrification Facility
Irvine, Orange County

A. MONITORING GUIDELINES

Monitoring shall be in accordance with the following:

1. All sampling and sample preservation shall be in accordance with the current edition[1] of "*Standard Methods for the Examination of Water and Wastewater*" (American Public Health Association).

2. All laboratory analyses shall be performed in accordance with test procedures under 40 CFR 136 (latest edition)[1] "*Guidelines Establishing Test Procedures for the Analysis of Pollutants*," promulgated by the United States Environmental Protection Agency (EPA), unless otherwise specified in this Monitoring and Reporting Program (M&RP). In addition, the Regional Board and/or EPA, at their discretion, may specify test methods which are more sensitive than those specified in 40 CFR 136.

3. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services or EPA or at laboratories approved by the Regional Board's Executive Officer.

4. The discharger shall multiply each measured or estimated congener concentration by its respective toxic equivalency factor (TEF) as shown below and report the sum of these values. The discharger shall use the U.S. EPA approved test method 1613 for dioxins and furans. The discharger shall report the analytical results of the monitoring for each congener, including the quantifiable limit (approved reporting limit) and the method detection limit, and the measured or estimated concentration.

Toxic Equivalency Factors for 2,3,7, 8-TCDD Equivalents	
Congener	TEF
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1

[1] *Current or latest edition refers to those editions in effect when this Order is adopted.*

Toxic Equivalency Factors for 2,3,7, 8-TCDD Equivalents	
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

5. The discharger shall tabulate the monitoring data to clearly illustrate compliance and/or noncompliance with the requirements of the Order.

6. For every item of monitoring data where the requirements are not met, the monitoring report shall include a statement discussing the reasons for noncompliance, and of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and an estimate of the date when the discharger will be in compliance. The discharger shall notify the Regional Board by letter when compliance with the time schedule has been achieved.

7. Annual samples shall be collected in September.

8. A "grab" sample is defined as any individual sample collected in less than 15 minutes.

9. Weekly samples shall be collected on any representative day of each week.

10. Monthly samples shall be collected on a representative day of the month.

B. INFLUENT MONITORING

A grab sample representative of the influent to the denitrification facility shall be monitored on a monthly basis for arsenic, dissolved oxygen, selenium, sulfate, total nitrogen and total phosphorous.

C. EFFLUENT MONITORING

1. The discharger shall visually monitor and record all flows and the duration of all waste discharges.

2. All samples shall be representative of waste discharge under conditions of peak load.

3. A sampling station shall be established at Peters Canyon Wash, at the discharge point. This station shall be located where representative samples can be obtained. The following shall constitute the effluent monitoring program:

Constituent	Type of Sample	Units	Minimum Frequency of Sampling & Analysis
Flow	Flowmeter	GPD	Daily
Biochemical Oxygen Demand	Grab	mg/l	Weekly
Suspended Solids	Grab	mg/l	Weekly
Dissolved Oxygen	Grab	mg/l	Weekly
Sulfate	Grab	mg/l	Weekly
Total Nitrogen	Grab	mg/l	Weekly
Total Phosphorous	Grab	mg/l	Weekly
Arsenic	Grab	ug/l	Weekly
Selenium	Grab	ug/l	Weekly
2,3,7,8-TetraCDD	Grab	ρg/l (parts-per-quadrillion)	Annually for the first three years only (see A.4. & A.5.)
1,2,3,7,8-PentaCDD	"	"	"
1,2,3,4,7,8-HexaCDD	"	"	"
1,2,3,6,7,8-HexaCDD	"	"	"
1,2,3,7,8,9-HexaCDD	"	"	"
1,2,3,4,6,7,8-HeptaCDD	"	"	"
OctaCDD	"	"	"
2,3,7,8-TetraCDF	"	"	"
1,2,3,7,8-PentaCDF	"	"	"
2,3,4,7,8-PentaCDF	"	"	"
1,2,3,4,7,8-HexaCDF	"	"	"
1,2,3,6,7,8-HexaCDF	"	"	"
1,2,3,7,8,9-HexaCDF	"	"	"
2,3,4,6,7,8-HexaCDF	"	"	"
1,2,3,4,6,7,8-HeptaCDF	"	"	"
1,2,3,4,7,8,9-HeptaCDF	"	"	"
OctaCDF	"	"	"
Remaining EPA Priority Pollutants (See Attachment "A")	Grab	ug/l	Annually

D. RECEIVING WATER MONITORING

1. The following receiving water stations shall be monitored for the indicated constituents:

Station A:[2] Peters Canyon Wash, within 100 feet upstream of the point of discharge.
Station B: Peters Canyon Wash, upstream of confluence with El Modena Channel.

Station	Constituent	Unit	Type of Sample	Minimum Frequency of Sampling & Analysis
A and B	Dissolved Oxygen	mg/l	Grab	Weekly
A and B	Temperature	°C	Grab	Weekly

A check for the presence of any color changes, foam, deposition of material, or odor in the receiving water from the discharge shall be made weekly, unless a problem is noted, then the frequency shall increase to daily at station B. The frequency may return to weekly upon approval of the Executive Officer or the Executive Officer's designee.

E. PHOSPHOROUS OFFSET MONITORING

1. The volume of sediment removed from the San Diego Creek Basins used to offset the discharge of phosphorous from the denitrification facility, shall be determined and recorded on a permanent log each year.

2. Representative samples of the sediment removed from the San Diego Creek Sediment Basins used to offset the phosphorous discharged from the denitrification facility shall be taken and analyzed for total phosphorous.

3. In October of each year, the discharger shall calculate the mass of phosphorous discharged from the denitrification facility during the previous year.

4. In October of each year, the discharger shall calculate the mass of phosphorous in the sediment removed from the San Diego Creek Sediment Basins.

F. REPORTING REQUIREMENTS

1. Within 24 hours of finding any discharge that is in violation of any term or condition of this Order, the discharger shall report their findings to the Regional Board.

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[2] *If there is no flow upstream of the point of discharge in Peters Canyon Wash, only Station B monitoring is required.*

2. Monitoring reports shall be submitted by the 30th day of each month and shall include:

   a. The results of all chemical analyses for the previous month, and annual samples whenever applicable,
   b. The daily flow data, and
   c. A summary of the month's activities

3. The report due on October 30th, of each year, shall contain the phosphorous mass calculations and all of the flow, volume, and chemical analysis data used to support those calculations. This report shall also include all data and calculations used to support compliance with the 12-month average limit for selenium.

4. The monthly reports shall include all of the selenium data collected during each monthly reporting period and the calculations used to determine the monthly selenium average.

5. All reports shall be arranged in a tabular format to clearly show compliance or noncompliance with each discharge specification.

6. For every item where the requirements are not met, the discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with the requirements at the earliest time and submit a timetable for correction.

7. All reports shall be signed by a responsible office or duly authorized representative of the discharger and shall be submitted under penalty of perjury.

Ordered by_____

Gerard J. Thibeault
Executive Officer

December 3, 2002

EPA PRIORITY POLLUTANT LIST

Metals	Method
Antimony	ICP
Arsenic	GF/AA
Beryllium	ICP
Cadmium	ICP
Chromium	ICP
Copper	GF/AA
Lead	GF/AA
Mercury	CV/AA
Nickel	ICP
Selenium	GF/HYDRIDE
Silver	ICP
Thallium	ICP
Zinc	ICP

Miscellaneous	Method
Cyanide	335.2/335.3
Asbestos (not required unless requested)	
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (TCDD)	8280

Pesticides	Method
Aldrin	608
Chlordane	"
Dieldrin	"
4, 4' - DDT	"
4, 4' - DDE	"
4, 4' - DDD	"
Alpha Endosulfan	"
Beta Endosulfan	"
Endosulfan Sulfate	"
Endrin	"
Endrin Aldehyde	"
Heptachlor	"
Heptachlor Epoxide	"
Alpha BHC	"
Beta BHC	"
Delta BHC	"
Gamma BHC	"
Toxaphene	"
PCB 1016	"
PCB 1221	"
PCB 1232	"
PCB 1242	"
PCB 1248	"
PCB 1254	"
PCB 1260	"

Base/Neutral Extractibles	Method
Acenaphthene	625
Acenaphthylene	"
Anthracene	"
Benzidine	"
Benzo (a) Anthracene	"
Benzo (a) Pyrene	"
Benzo (b) Fluoranthene	"
Benzo (g,h,i) Perylene	"
Benzo (k) Fluoranthene	"
Bis (2-Chloroethoxy) Methane	"
Bis (2-Chloroethyl) Ether	"
Bis (2-Chloroisopropyl) Ether	"
Bis (2-Ethylhexyl) Phthalate	"
4-Bromophenyl Phenyl Ether	"
Butyl Benzyl Phthalate	"
2-Chloronaphthalene	"
Chrysene	"
Dibenzo (a,h) Anthracene	"
4-Chlorophenyl Phenyl Ether	"
1,2-Dichlorobenzene	"
1,3-Dichlorobenzene	"
1,4-Dichlorobenzene	"
3,3-Dichlorobenzidine	"
Diethyl Phthalate	"
Dimethyl Phthalate	"
Di-N-Butyl Phthalate	"
2,4-Dinitrotoluene	"
2-6-Dinitrotoluene	"
1,2-Dipenylhydrazine (as Azobenzene)	"
Di-N-Octyl Phthalate	"
Fluoranthene	"
Fluorene	"
Hexachlorobenzene	"
Hexachlorobutadiene	"
Hexachlorocyclopentadiene	"
Hexachloroethane	"
Indeno (1,2,3-cd) Pyrene	"
Isophorone	"
Naphthalene	"
Nitrobenzene	"
N-Nitrosodimethylamine	"
N-Nitrosodi-N-Propylamine	"
N-Nitrosodiphenylamine	"
Phenanthrene	"
Pyrene	"
1,2,4-Trichlorobenzene	"

Acid Extractibles	Method
2-Chlorophenol	625
2,4-Dichlorophenol	"
2,4-Dimethylphenol	"
4,6-Dinitro-O-Cresol	"
2,4-Dinitrophenol	"
2-Nitrophenol	"
4-Nitrophenol	"
P-Chloro-M-Cresol	"
Pentachlorophenol	"
Phenol	"
2, 4, 6 - Trichlorophenol	"

Volatile Organics	Method
Acrolein	603
Acrylonitrile	"
Benzene	601/602
Bromoform	"
Carbon Tetrachloride	"
Chlorobenzene	"
Chlorodibromomethane	"
Chloroethane	"
2-Chloroethyl Vinyl Ether	"
Chloroform	"
Dichlorobromomethane	"
1,1-Dichloroethane	"
1,2-Dichloroethane	"
1,1-Dichloroethylene	"
1,2-Dichloropropane	"
1,3-Dichloropropylene	"
Ethylbenzene	"
Methyl Bromide	"
Methyl Chloride	"
Methylene Chloride	"
1,1,2,2-Tetrachloroethane	"
Tetrachloroethylene	"
Toluene	"
1,2-Trans-Dichloroethylene	"
1,1,1-Trichloroethane	"
1,1,2-Trichloroethane	"
Trichloroethylene	"
Vinyl Chloride	"